STANDARDS UPDATE NOTICE (SUN)
ISSUED: August 7, 2025

STANDARD INFORMATION

Standard: UL 252A
Standard ID:
Compressed Gas Regulator Accessories [ANSI/CAN/UL/ULC 252A:2022 Ed.5+R:28Feb2025]
Previous Standard ID:
Compressed Gas Regulator Accessories [ANSI/CAN/UL/ULC 252A:2022 Ed.5]
Compressed Gas Regulator Accessories [UL 252A:2010 Ed.4+R:12Jul2019]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **February 28, 2027**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

All products must comply with the February 24, 2025 revision prior to the effective date.

Note: The 5th edition has been renumbered to ANSI/CAN/UL/ULC 252A.

Overview of Changes:

5th edition dated October 27, 2022:
- Addition of requirements for hydrogen materials
- Addition of the Embrittlement Test

February 28, 2025 revision:
- Removing MPS gas from the standard

Specific details of new/revised requirements are found in table below.

Note: If the listing references a Canadian standard, per the Canadian Electrical Code (CSA C22.2#0) Section titled Language of markings, Caution and Warning Markings shall be in English and French.

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.

STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		Additions to existing requirements are <u>underlined</u> and deletions are shown ~~lined out~~ below.
		The following changes reflect the issuing of the 5th edition:
7	Info	**Materials**
7.11		***New clause added;*** Aluminum or aluminum alloys shall not be used for parts in contact with oxygen or oxygen enriched gases, where the percentage of oxygen exceeds 21 % by volume, on regulators intended to reduce a pressure greater than 435 psig (3000 kPa) to the use pressure.
10		***New section added;*** **Hydrogen Material**
10.1		Materials in contact with hydrogen shall be resistant to the action hydrogen embrittlement and hydrogen accelerated fatigue. This shall include the surface finishing techniques (e.g., electro-polishing) and welding which may also introduce hydrogen into a metal, resulting in accelerated embrittlement.
10.2		Materials and design shall be such that there will be no significant change in the functioning of the device, deformation, or mechanical change in the device, and no harmful corrosion, deformation, or deterioration of the materials. Additional consideration shall be made for nonmetallic materials since hydrogen diffuses through these much easier than through metals.
10.3		Dissimilar metals in interconnecting piping, tubing, fittings, and other components shall be avoided, or properly addressed to prevent electrolytic and/or galvanic corrosion. Metal fittings should be compatible with metal tubing materials. If the use of materials from different galvanic groups are used, standard commercial corrosion mitigation methods shall be used. Note: A Technical Database for Hydrogen Compatibility of Materials may be found at Sandia National Laboratory Technical Reference for Hydrogen Compatibility of Materials. Additional guidance may be found in: AIAA G-095A, Guide to Safety of Hydrogen and Hydrogen Systems ASME B31.12, Hydrogen Piping and Pipelines CSA/AM ANSI/CSA CHMC 1, Test methods for evaluating material compatibility in compressed hydrogen applications – Metals

CLAUSE	VERDICT	COMMENT
		CSA/AM CSA/ANSI CHMC 2:19, Test methods for evaluating material compatibility in compressed hydrogen applications – Polymers ISO TR 15916, Basic considerations for the safety of hydrogen systems.
10.4		The manufacturer shall provide documentation verifying the materials' suitability for hydrogen service. Considerations shall be given for such characteristics as permeability, creep, long-term aging, stress cracking, and retention of mechanical properties as appropriate. Acceptable materials include stainless steels (304, 304L, 308, 316, 316L, 321, 347, PH17-7, or PH18-8), aluminum alloys, copper, and copper alloys. Unacceptable materials include nickel, most nickel alloys, titanium alloys, gray iron, ductile iron, and malleable cast iron.
10.5		When the manufacturer is unable to provide conclusive evidence of the compatibility of all materials in the hydrogen gas stream or does not use the acceptable materials listed in 10.4, then the embrittlement test shall be performed.
18		***New section added;*** **Hydrogen Low Temperature Test**
18.1		An elastomeric part for hydrogen use shall not show any cracking or other damage after being tested as described in 18.2.
18.2		Three samples of the elastomeric part, together with a steel mandrel having a diameter of 0.25 in (6.4 mm) shall be placed for 24 h in a cold chamber at a temperature of -40 ±1 °C (-40 ±2 °F). While still at the temperature of the cold chamber, each sample shall be bent around the mandrel until the segments of the sample touch. The operator shall wear gloves while handling the samples and the mandrel to reduce heat transfer to the samples.
27	Info	***New section added;*** **Embrittlement Test**
27.1		One of the following tests shall be performed: a) Standard Test Method for Determination of Susceptibility of Metals to Embrittlement in Hydrogen Containing Environments at High Pressure, High Temperature, or both, ASTM G142; or b) Standard Test Method for Determination of the Susceptibility of Metallic Materials to Hydrogen Gas Embrittlement (HGE), ASTM F1459. 1) Results of testing done in accordance with ASTM G142 shall be at least one. Ratios below one indicate a susceptibility to hydrogen embrittlement with the test method outlined in ASTM G142. 2) Ratios above two indicate a susceptibility to hydrogen embrittlement with the test method outlined in ASTM F1459.
	Info	**MARKINGS**
29	Info	**General**

CLAUSE	VERDICT	COMMENT
29.4		***New clause added;*** Accessories intended for use with fuel gases and oxygen and are equipped with nonrechargeable batteries, shall be marked "Replacement batteries must conform to UL 1642 or UL 2054", as applicable. See 9.1.
		The following changes reflect the February 28, 2025 revision date:
1	Info	**Scope**
1.5	Info	For the purposes of this standard the terms “LP-Gas” and “Propane” are interchangeable.
5	Info	**Glossary**
5.3	Info	FUEL GAS – Acetylene, hydrogen, natural gas, LP-Gas, propylene, ~~(Propane), methylacetylenepropadiene stabilized (MPS),~~ and other liquefied and nonliquefied flammable gases that are stable because of their composition or because of the conditions of storage.
Table 5.1		**Regulator Classes** **Class** | **Test pressure** (**Psi** | **(MPa)**) | **Definition** I | 200 | (1.38) | Station type regulator II | 375 | (2.59) | LP-Gas ~~(Propane) or MPS~~ propylene regulator III | 500 | (3.45) | CGA Nos. 160, 165, 182, 200, 240, 280, 290, ~~285,~~ 295, 300, 410, 415, 440, 450, 510, 520, 600, 668, 678, 679 IV | 1800 | (12.41) | Carbon dioxide regulator V | 3000 | (20.68) | CGA Nos. 110, 170, 180, 280, 296, 320, 326, 330, 346, 350, 500, 540, 555, 580, 590, 660, 670, 705, 860, 870, 880, 890, 910, 930, 940, 950, 960, 965 VI | 4000 | (27.58) | CGA No. 577 VII | 5500 | (37.92) | CGA No. 577
7	Info	**Materials**
7.3		Unalloyed copper or a copper alloy exceeding 67 % copper shall not be used for parts in contact with acetylene. ~~or MPS.~~
16	Info	**Volume Change and Weight Loss Tests**

CLAUSE	VERDICT	COMMENT
		Test Liquids for Synthetic-Rubber Materials
Table 16.1		

Gas in contact with part	Test liquid
LP-Gas	n-Hexane
Manufactured and Natural Fuel Gases	IRM 903 Oil and n-Hexane
~~MPS~~	~~Liquid MPS~~
Propylene	Liquid Propylene